METHOD AND SYSTEM DISTRIBUTE SEARCH QUERIES OVER A NETWORK

Inventor: Chris Fook-Choong Foo

Citizenship: Malaysian

Residence: P.O. Box 28151, Santa Ana, California 92799 U.S.A.

DETAILED DESCRIPTION

Fig. 1 illustrates the distribution of search identifier to remote systems over a network. **1** shows user request keyword search either from a web browser or a proprietary desktop application. When the Centralized Broadcasting System's receiver program **20** received the search identifier consists of information such as requester's IP Address, Session ID, search keywords and categories via HTTP or other network communication protocol. The matching program **26** resided in Centralized Broadcasting System will parse the search identifier and conduct an initial search against its database **23**. If the search keyword is ambiguous and required more information, the transmitting program **19** will sent a string of generic tag to requester's system requesting more information. An example of ambiguous keyword is "Foo", where the matching program **26** will require additional information to improve the search accuracy. Thus, a tag such as <history>Foo</history> will be transmitted back to requester's system requesting more information. When the retrieving program **9** received the tag, it will be forwarded to the mapping program **11** to translate the tag and querying the search history **14** looking for any data that consists of keyword "Foo". If the search does return a value for example, "music", it will be translated in a return tag <searh found>music</search found> ready to be transmitted back to the Centralized

Broadcasting Systems. Otherwise, if search return a null value, the return tag will be empty.

Upon receiving the additional information, the Centralized Broadcasting System's matching program **26** will conduct the search against its database **23**. The search keyword will be matched against any index **24** stored in the database and the description **25** corresponded to the index will be cached into a temporary memory ready to be transmitted back to the requester's system. Nevertheless, the search keyword as well as information in the search identifier will be temporary stored in the Centralized Broadcasting System's Request Subsystem **27** ready to be queried by all remote systems.

Fig 4 illustrates the Remote System where the Daemon Listener program **34** is scheduled to connect to Centralized Broadcasting Systems querying for any search keywords. The Remote System can be a web hosting companies or an individual private system with required program installed. The scheduling of the remote Daemon Listener is independent of each others which mean, some remote daemon could scheduled to connect every 5 seconds and some could be every 10 minutes.

The authentic program **37** resided in the Remote Systems will exchange the private and public encrypted keys with Centralized

Broadcasting system's authentic program **21** verifying every transactions. Once the Remote Systems received the all search identifiers from the Centralized Broadcasting Systems, the matching Program **43** will conduct a details match against its database. If any record is found, the description will be cached in the temporary memory ready to be transmitted to the requester's systems directly as batch.

In additional to searching for keywords, requester also able to combine the keyword and filename search. For example, the requester would be able to search for topic regarding "Foo" simultaneously executing a program "runReports.exe" residing on one of the remote systems. Of cause the basic "runReports.exe" such as the location of the program file should already be setup in the Remote System's database. After the matching process is completed, the search result stored in the temporary memory will then be transmitted to requester's system by the remote transmitting program **35**.

The requester's filtering Subsystem **12** will filter all incoming data from the Remote Systems based on the Preference **15** stored. One such example of the information stored in the Preference is maximum allowed number of records return, or to block certain remote IP Address etc.

BACKGROUND

Most search engines operate under the assumption that keywords will be entered and a result document will be returned for viewing. However, this assumption is not true where a user might want to search for a link or documents based on the keyword entered simultaneously would also like to perform other tasks simultaneously such as retrieve a file or execute a program resided in the remote system which related to the search keyword.

In addition, the existing search engines are centralized search systems where all the search information stored in a centralized system. This created two problems:

1. A webmaster might have to wait for months from the search hosting companies before the web site is reviewed and posted in the search engines database.
2. The search engine database is growing exponentially with more data being added to the database.

Therefore, a needed for methods and apparatus to resolve the overwhelm data stored in a centralized system as well as creating a dynamic and accurate search systems.

SUMMARY

Methods and apparatus consistent with the present invention, as embodied and broadly described herein, provide a decentralized search systems in response to the over burden centralized systems. In addition, this invention also allowing other tasks to be performed simultaneously while searching is being performing. Consistent with the invention, a personalized filtering system in the user's local system allowing a more accurate search result being display to the user.